

## Monitoring and analysis plan for metals assessment around Bullseye Glass.

### Introduction

### Method

#### **Sampling locations**

Sampling will be done in four directions emanating from Bullseye Glass. The Samplers will be place near areas where children play. Children are especially susceptible to air toxics because they run around more causing them to breathe more air and they are still growing and developing.

The three sites near children's play areas are near the Powell Park field across from Cleveland High School, near Winterhaven Elementary School, and at the Daycare just south of the Fred Meyers Head Quarters building. A fourth site will be set up to the northwest of Bullseye to capture the pollutants going over the business district. Wind data collected in October showed most of the elevated days occurred when the wind was blowing from the SE to the NW. This site will capture those samples.



A proposed sampling map for metals monitoring near Bullseye Glass.

Start dates –

## Site Timing

Daycare started on Feb 9<sup>th</sup> running 6am to 6pm samples.

Fred Meyer parking lot or next door at Powell Park. Awaiting power drop - This will start 2/17.

Winterhaven is waiting on power from the City or Portland Parks 2/17.

Site to the North can start on Feb 12<sup>th</sup>.

Met sites all ready operational at Reed College and next to Bullseye.

## Sampling methods

### PM10 Metals

DEQ is going to use two methods to collect data around Bullseye because of equipment limitations and difficulty getting power to some of the sites. DEQ has low volume (LV) BGI samplers and Low volume Air Metrics (16.7lpm) samplers which run on battery power. These will be deployed in areas where we can't get power to run the Hi Volume samplers.

The LV method uses the EPA School Air Toxics metals low volume (LV) sampler method with flow of 16.7LPM. The filter media is Teflon and the analysis is done using ICP-MS.

The HV method is EPA TO-15 which uses a Hi-Volume (HV) sampler (40 cfm) to collect samples from midnight to midnight at 40 cfm. The filter media is quartz. The analysis is done using ICP-MS. This is a NATTS TAD method.

Both methods are EPA approved methods but may result in slightly different measurements. A collocated site will help us tie these two methods together to see how well they agree. The HV method is also used at three other sites in Portland.

### TSP Hexavalent Chrome

DEQ will deploy a 15lpm, flow controlled sampler (BGI sampler) with a Chrome 6+ sampler. This is a NATTS TAD method.

### Continuous sampling

DEQ will also deploy a portable Met One E-Sampler (nephelometer) to track diurnal patterns. This will show when most of the particulate is occurring. This will be deployed at the daycare.

### Meteorology

DEQ will also include wind speed and wind direction met stations that sit on top of roof tops. Met One 010 Wind Speed sensor, 020 Wind direction, with Campbell data logger.

## Sampling Calendar.

### Daycare schedule:

<b>February</b>						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
				Prep samplers	Set up site, set up sample, Audit sampler	
7 Primary 2 Tentative start	8 Sample 6am to 6pm for DHS	9 Sample 6am to 6pm for DHS	10 Sample 6am to 6pm for DHS	11 Sample 6am to 6pm for DHS	12 Sample 6am to 6pm for DHS	13 Sample 24 hrs for DEQ
14 Sample 24 hrs for DEQ	15 Sample 6am to 6pm for DHS	16 Sample 6am to 6pm for DHS + field blank	17 Sample 6am to 6pm for DHS	18 Sample 6am to 6pm for DHS	19 Sample 6am to 6pm for DHS	20 Sample 24 hrs for DEQ
21 Sample 24 hrs for DEQ	22 Set up and retrieve sample	23	24 Primary 1 & 2	25 Set up and retrieve sample	26	27 Sample 24 hrs for DEQ
28 Set up and retrieve sample	29 Set up and retrieve sample	1-Mar Sample 24 hrs for DEQ	2 Follow EPA 1/6 schedule going forward	3	4	5

Winterhaven, Fred Meyer Parking lot, and NW site schedule.

<b>February</b>						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4 Prep samplers	5 Set up site, set up sample, Audit sampler	6
7 Primary 2 Tentative start	8 Sample 6am to 6pm for DHS	9 Sample 6am to 6pm for DHS	10 Sample 6am to 6pm for DHS	11 Sample 6am to 6pm for DHS	12 Sample 6am to 6pm for DHS	13 Sample 24 hrs for DEQ
14	15 Sample 6am to 6pm for DHS	16 Sample 6am to 6pm for DHS + field blank	17 Sample 6am to 6pm for DHS	18 Sample 6am to 6pm for DHS	19 Sample 6am to 6pm for DHS	20 Sample 24 hrs for DEQ
21 Sample 24 hrs for DEQ	22 Set up and retrieve sample	23	24 Sample 24 hrs for DEQ	25 Set up and retrieve sample	26	27 Sample 24 hrs for DEQ
28 Set up and retrieve sample	29 Set up and retrieve sample	<b>1-Mar</b> Sample 24 hrs for DEQ	2 <b>Follow EPA 1/6 schedule going forward</b>	3	4	5